

CLAIMS

1. A method for producing personalized printed material comprising:
 - (a) selectively gathering stock sheets and assembling the stock sheets into designated sets of sheets;
 - (b) sequentially processing the stock sheets in each designated set of sheets to image personalized information onto each stock sheet;
 - (c) re-gathering the stock sheets into the designated sets of sheets; and
 - (d) presenting the designated sets of sheets for final processing.
2. The method of claim 1, wherein selectively gathering stock sheets and assembling the stock sheets into designated sets of sheets comprises:
 - (a) placing the stock sheets into individual bins of a multi-station collator;
 - (b) sending a control signal to designated individual bins to activate placement of selected pre stock sheets onto a transport system; and
 - (c) transporting the selected stock sheets to a staging area.
3. The method of claim 2, wherein placing the stock sheets into individual bins comprises placing stock sheets having predetermined indicia thereon.
4. The method of claim 3, wherein sending a control signal to designated individual bins comprises storing the predetermined indicia in a memory accessible by a control system and activating selected bins according to instructions to provide a set of stock sheets having the predetermined indicia thereon.
5. The method of claim 2, wherein placing the stock sheets into individual bins of a multi-station collator comprises placing the stock sheets into individual bins of a friction feed collating system.

6. The method of claim 2, wherein placing the stock sheets into individual bins of a multi-station collator comprises placing the stock sheets into individual bins of a vacuum and rotary collating system.

7. The method of claim 2, wherein placing the stock sheets into individual bins of a multi-station collator comprises placing the stock sheets into individual bins of swing arm collating system.

8. The method of claim 1, wherein selectively gathering stock sheets and assembling the stock sheets into sets of sheets comprises assembling sets of stock sheets in which the number of stock sheets in each set varies from one set to the next, or from one group of sets to the next group of sets.

9. The method of claim 1, wherein sequentially processing the stock sheets in each designated set of sheets to image personalized information onto each stock sheet comprises:

- (a) placing each stock sheet into a re-feeding system; and
- (b) positioning each stock sheet within the imaging field of an imaging system.

10. The method of claim 9, wherein the method further comprises scanning each stock sheet to verify the identity of the stock sheet as properly belonging to the set of stock sheets.

11. The method of claim 9, wherein placing each stock sheet into a re-feeding system comprises transporting the designated sets of sheets from a collator at a constant transport rate to the re-feeding system, and wherein the re-feeding system operates at a rate of about 2 to 50 times faster than the transport rate of the collator.

12. The method of claim 1, wherein presenting the designated sets of sheets for final processing comprises organizing the sets of sheets into a user specified format.

13. The method of claim 12, wherein organizing the designated sets of sheets into a user specified format comprises one or more of binding, attaching, or packaging the designated sets of sheets.

14. The method of claim 12, wherein organizing the designated sets of sheets comprises packaging the designated sets of sheets by one or more of envelope stuffing, shrink wrapping, and over wrapping.

15. The method of claim 1 further comprising inserting a package insert into the designated sets of sheets before presenting the designated sets of sheets for final processing.

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16. A method for producing personalized printed material comprising:

- (a) assembling target information into a data base and creating general and specific information files;
- (b) using the general information files to selectively collate pre-printed sheets into designated sets of sheets;
- (c) individually feeding the pre-printed sheets from each designated set of sheets to an imaging system;
- (d) using the specific information files to image personalized information on each pre-printed sheet;
- (e) re-gathering the pre-printed sheets into the designated sets of sheets; and
- (f) presenting the designated sets of sheets for final processing.

17. The method of claim 16, wherein presenting the designated sets of sheets for final processing comprises:

- (a) packaging the designated sets of sheets; and
- (b) using the specific information files to image address information on the packaging.

18. The method of claim 16, wherein creating general information files comprises:

- (a) receiving recipient profile information; and
- (b) organizing the recipient profile information into topic categories.

19. The method of claim 18, wherein using the general information files to selectively collate pre-printed sheets into designated sets of sheets comprises:

- (a) selecting a particular topic from the topic categories; and
- (b) identifying bins of pre-printed sheets that contain pre-printed sheets matching the particular topic.

20. The method of claim 16, wherein creating specific information files comprises:

- (a) receiving recipient profile information; and
- (b) organizing the recipient information into recipient data files including identification files, address files, customer specific pricing files, and one or more files containing product preference, retail store preference, and geographic location.

21. The method of claim 20, wherein using the specific information files to image personalized information on each pre-printed sheet comprises:

- (a) matching job request information with one or more recipient data files; and
- (b) imaging information from the one or more recipient data files onto the pre-printed sheets.

22. The method of claim 16, wherein individually feeding the pre-printed sheets from each designated set of sheets to an imaging system comprises:

- (a) placing each pre-printed sheet on a transport system; and
- (b) positioning each pre-printed sheet within the imaging field of an imaging system.

23. The method of claim 22, wherein positioning each pre-printed sheet within the imaging field of an imaging system comprises positioning within the imaging field of a variable data imaging system.

24. The method of claim 23, wherein positioning each pre-printed sheet within the imaging field of variable data imaging system comprises positioning within the imaging field of a laser printing system or an ink jet printing system.

25. The method of claim 16, wherein using the general information files to selectively collate pre-printed sheets into designated sets of sheets comprises:

- (a) placing the pre-printed sheets into individual bins of a multi-station collator;
- (b) sending a control signal to designated individual bins to activate placement of selected pre-printed sheets onto a transport system; and
- (c) transporting the selected pre-printed sheets to a staging area.

26. A system for producing personalized printed material comprising: 3

- (a) a collator coupled to a re-feeder, the collator configured to selectively gather stock sheets and to assemble the stock sheets into designated sets of sheets;
- (b) an imaging system coupled to the re-feeder, the imaging system configured to image information onto the stock sheets to produce personalized sheets;
- (c) a regathering system coupled to the imaging system and configured to re-gather the personalized sheets into the designated sets of sheets;
- (d) a final process system coupled to the regathering system and configured to perform one or more of binding, attaching, or packaging the final sets of sheets; and
- (e) a control system that provides control signals for processing and imaging the stock sheets and the personalized sheets.

27. The system of claim 26 further comprising an aligning system configured to receive individual stock sheets from the re-feeder and to align the stock sheets in a predetermined orientation for imaging the information onto the preprinted sheets.

28. The system of claim 27, wherein an imaging system comprises:
a conveyor device that receives aligned stock sheets from the alignment system;
a scanning device that scans control indicia on the stock sheets and communicates with the control system; and
a printing device that prints personalized information on the stock sheets.

29. The system of claim 26, wherein the reassembly station comprises a rotary indexing system that collects the stock sheets into the final set of sheets and a conveyor that transports the sheets to the final process system.

30. The system of claim 26 further comprising an insert injection system coupled to a second imaging system wherein the insert injection system and second imaging system are configured to place one or more additional printed sheets into the designated set of sheets in response to commands from the control system.

31. A system for producing personalized printed material comprising:
(a) a first collator coupled to a first re-feeder, the first collator configured to selectively gather pre-printed sheets and to assemble the pre-printed sheets into designated sets of primary sheets;
(b) a first imaging system coupled to the first re-feeder, the first imaging system configured to image information onto the pre-printed primary sheets;
(c) a second collator coupled to a second re-feeder, the second collator configured to selectively gather pre-printed insert sheets and to assemble the pre-printed insert sheets into designated sets of insert sheets;
(d) a second imaging system coupled to the second re-feeder, the second imaging system is configured to image information onto the pre-printed insert sheets;
(e) a reassembly station coupled to the first and second imaging systems and configured to re-gather the pre-printed primary sheets into the

designated sets of primary sheets and to re-gather the pre-printed insert sheets into the designated sets of insert sheets;

(f) a merging station coupled to the reassembly station and configured to merge the designated sets of insert sheets into the designated sets of primary sheets to provide final sets of sheets; and

(g) a final process system configured to perform one or more of binding, attaching, or packaging the final sets of sheets.

32. The system of claim 31, wherein the merging station and the final processing system are arranged in a linear relationship to the first collator and first imaging system.

33. The system of claim 31, wherein the merging station and the final processing system are arranged at substantially right angles to the first and second collators and the first and second imaging systems.

34. The system of claim 31 further comprising a turn over device positioned between the merging station and the final processing system.

35. The system of claim 31, wherein the first and second collators include a plurality of bins containing the pre-printed sheets, and wherein the first collator includes a greater number of bins than the second collator.